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10/032,749	12/27/2001	Philippe C. Byrnes	A-70205/AJT	5801

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Aldo J. Test
FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP
Suite 3400
Four Embarcadero Center
San Francisco, CA 94111-4187

EXAMINER

CHUNG, JI YONG DAVID

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/032,749	Applicant(s) BYRNES, PHILIPPE C.	
	Examiner Ji-Yong D. Chung	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/6/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 12, 13, 21, and 22** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims **12, 13, 21, and 22**, the phrase "for example" renders the claims indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

For the purpose of the examination on merits, the claims have been treated as if the limitations that immediately follow "for example" do not exist.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen in view of Challenger et al (Challenger hereinafter).

With regard to **claim 1**, Nguyen shows a system comprising:

an intermediate device [See Fig. 8, which shows the bandwidth manager BWM and bandwidth client BWC. While not shown, the host of the bandwidth manager and client is inherent in Nguyen. See lines 58-60, Nguyen, for the explanation that BWM and BWC are software entities], *said intermediate device including memory for storing a program* [The inherent computer would have the memory] that

monitors the condition and availability of components in the computer network, including links and intermediate nodes [bandwidth client BWC monitors the traffic. See lines 1-10, column 9], and that also

monitors the traffic load of the computer network that includes said program determining whether imbalances exist between traffic load and bandwidth in said network and which determines how to optimally correct said imbalances either [See lines 10-51, column 9, Nguyen for the description of the algorithm for determining the bandwidth need based on current load] by

buying and selling of short term bandwidth or by actuation of said network's topology and resources, including links and/or intermediate node capacities [As shown in lines 10-51, column 9, the BWC computes the amount of bandwidth for “buying” (bandwidth needed) and the amount of bandwidth for “selling” (redundant bandwidth)] and

downloading said bandwidth actuations to bandwidth managers in the computer communications network [BWC issues bandwidth reallocation

commands to the bandwidth manager BWM. See lines 61-67, column 8, Nguyen]; and

a set of traffic actuation devices, said devices including intermediate nodes responsible for relaying traffic between links in the computer communications network [[HDLC or Driver in Fig. 8], including bandwidth managers responsible for adding or deleting bandwidth in the computer communications network either temporarily or permanently. [See lines 22-62, column 10 for the description of the bandwidth manager].

Nguyen does not show the *cache content managers responsible for deciding where to locate content caches in the computer communications network and when to have each content cache active.*

Challenger shows the content cache manager in Fig. 1A.

It would have been obvious to one of ordinary skill in the art at the time the inventions were made to use Challenger's cache manager within Nguyen's network, because, as stated in lines 49-55, column 1 of Challenger reference, the cache manager would provide decreased system response time for Nguyen's network.

Claim 2 cites that *said intermediate device is a computer system*. The BWC (program residing on "intermediate device") is software entity, as mentioned above. Its host must be a computer system, and therefore, is inherent in Nguyen's system.

Claim 3 cites that *said intermediate device is an automatic network management computer*. Nguyen's BWC host must be a computer; and therefore, the networked computer is inherent in Nguyen's system. By the virtue of hosting BWC, the computer automatically manages network. Thus, the computer is "automatic network management computer."

With reference to **claim 4**, Nguyen shows *said intermediate device collects bandwidth and traffic statistics from intermediate nodes in the computer communications network that is being managed*. BWC receives traffic information from Driver. See lines 6-52, column 12 of Nguyen.

With reference to **claim 5**, Nguyen shows *said intermediate device determines the times and locations of bandwidth imbalances in the computer communications network and their persistence*. See lines 25-62, column 10, where BWM locates BWC (the locations of bandwidth imbalance).

With reference to **claim 6**, Nguyen shows *said intermediate device actuates the traffic intensity by downloading the times and locations of the bandwidth imbalances found in claim 5 to a bandwidth manager in the computer communications network*. See lines 25-62. BWM instructs BMC, after it receives (or "downloads") bandwidth request from BMC, which then alters its traffic utilization ("actuate the traffic intensity").

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. **Claims 7-31** are rejected under 35 U.S.C. 102(e) as being anticipated by Nguyen.

With reference to **claims 7-10**, all of their limitations are substantively included in claims 1-6, except that claims 7-10 do not contain any limitations of claims 1-6 that have been discussed with respect to Challenger. In other words, Nguyen meets all of the limitations of claims 7-10 and their limitations have been discussed above with respect to claims 1-6.

With reference to **claim 11**, Nguyen shows a method comprising the steps to:

(a) *Establish an objective to be attained* [See lines 1-50, column 9. Nguyen shows criteria (objectives) to be attained for BWC]; and

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(b) Monitor the arrival of traffic and its servicing by the network's links [See lines 1-10, column 9. BWC monitors traffic]; and

(c) Based on these measurements and/or estimates, decide the intervention (if any) to optimize the network's performance [See lines 33-50, column 9, in which the criteria is used by BWC to determine whether intervention is needed]; and

(d) Effect the change using the available management actuators--workload and/or bandwidth. See lines 22-64, column 10, for the description of BWM's action to change bandwidth using BWC and Driver.

Claim 12 cites that step (a) comprises *establishing an objective to be attained* [Language objected to under 112 has been removed] *and storing them in memory of a computer system.* See lines 1-50, column 9. Nguyen shows criteria (objectives) to be attained for BWC. The objectives are stored in memory of a computer system, as BWC is a software entity.

Claim 14 cites that *step (b) comprises monitoring the arrival of traffic and its servicing by the network's links and storing them in memory of a computer system.* See lines 1-10, column 9. BWC monitors traffic. Storing relevant information in memory has been discussed with respect to claim 12.

Claim 16 cites that *step (c) comprises deciding the intervention (if any) to optimize the network's performance and storing this in memory of a computer system.* See lines 33-50, column 9, in which the criteria is used by BWC to determine whether intervention is needed.

Storing relevant information in memory has been discussed with respect to claim 12.

Claim 18 cites that step *(d) comprises effecting the change using the available management actuators--workload and/or bandwidth, and storing these changes in memory of a computer system*. See lines 22-64, column 10, for the description of BWM. BWM effects the changes in bandwidths and records the changes in a channel database.

Claims 13, 15, 17, and 19 cite the limitations of claims 12, 14, 16, and 18 respectively, except that claims 13, 15, 17, and 19 speak of “automatic network management computer” rather than “computer system” as in claims 12, 14, 16, and 18. However, the rationale for the rejections of claims 12, 14, 16, and 18 still hold for claims 13, 15, 17, and 19, because Nguyen also teaches “automatic network management computer” for the following reasons: (1) Nguyen’s BWC host must be a computer; therefore, networked computers are inherent in Nguyen’s system; and (2) by the virtue of hosting BWC, the computer automatically manages network. Thus they are “automatic network management computers.”

Claims 20-28 include software versions of the limitations discussed above in reference to claims 11-19. Therefore, the reasons for the rejections of claims 11-19 apply to claims 20-28. Claims 20-28 are rejected for the same reasons as claims 11-19.

With reference to claims **29-31**, their limitations are substantively included in claims 7-10. The reasons for the rejections of claims 7-10 apply to claims 29-31. It should be noted that:

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(1) while the actual language used in claims 29-31 differ from those of claim 7, the limitations, they convey substantively the same meaning as claims 7-10, and (2) while claim 29 speaks of "processor," Nguyen meets the limitation. A host computer for Nguyen's BWC program will have a processor.

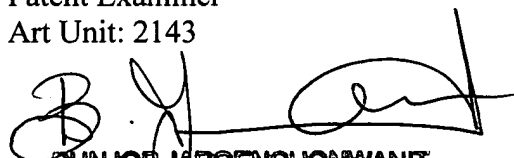
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji-Yong D. Chung whose telephone number is (571) 272-7988. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ji-Yong D. Chung
Patent Examiner
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BUN JOE JAROENCHONWANT
PRIMARY EXAMINER